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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,
OFF COAST OF OREGON, 10 JANUARY 1976

TELEDYNE GEOTECH

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Off Coast of Oregon, 10 January 1976

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APRIL 1976

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SDCS EVENT REPORT NO. 81

Off Coast of Oregon, 10 January 1976

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

| | "P" Arrival | Origin Time | Lat. | Long. | m_b | M_s |
|---------|-------------|-------------|------|-------|-------|-------|
| NORSAR | 09:09:59.1 | 08:58:46 | 43 N | 127 W | 5.6 | N/A |
| Hagfors | 09:10:08.5 | 08:59:09 | 47 N | 126 W | 5.6 | N/A |

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

08:58:42.6 43.3N 127.4W 5.4 N/A

All SDCS stations were operational during this period.

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. All LP channels at HN-ME and the LP radial channel at RK-ON had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at WH2YK, RK-ON and HN-ME were rotated. Signal clipping at CPSO and FN-WV prevented rotation of their LP horizontal channels.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

STATION DESCRIPTION

| SITE CODE | LOCATION | SITE COORDINATES DEG MN SECS | ELEVATION METERS | INSTRUMENTATION | |
|--------------|----------------------------|---------------------------------|---------------------|------------------|--------------------|
| | | | | SHORT-PERIOD | LONG-PERIOD |
| ALPA | Alaska | 65 14 00.0 N 147 44 36.0 W | 626 | None | 31300 |
| CPSO | McMinnville, Tennessee | 35 35 41.4 N 085 34 13.5 W | 574 | 6480 V 7515 H | SL210 V SL220 H |
| FN-WV | Franklin, West Virginia | 38 32 58.0 N 079 30 47.0 W | 910 | KS36000 | KS36000 |
| LASA | Billings, Montana | 46 41 19.0 N 106 13 20.0 W | 744 | HS10 | 7505A V 8700C H |
| HN-ME | Houlton, Maine | 46 09 43.0 N 067 59 09.0 W | 213 | KS36000 | KS36000 |
| NORSAR | Kjeller, Norway | 60 49 25.4 N 010 49 56.5 E | 379 | HS10 | 7505A V 8700C H |
| RK-ON | Red Lake, Ontario | 50 50 20.0 N 093 40 20.0 W | 366 | 18300 | SL210 V SL220 H |
| WH2YK | White Horse, Yukon | 60 41 41.0 N 134 58 02.0 W | 853 | 18300 | SL210 V SL220 H |

Note: The orientation of the radial instruments at FN-WV is assumed to be 16° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 10 JAN 76
08:58:46.0 43.000N 127.000W 0KM.

| STA. | ARRIVAL | RESIDUALS | | DIST. | AZ. |
|-------|------------|-----------|------|-------|-------|
| | | CALC | REST | | |
| LAO | 09 02 12.0 | -0.1 | 0.1 | 15.4 | 70.1 |
| WH2YK | 09 02 52.2 | 0.0 | 0.4 | 18.0 | 347.9 |
| RK-ON | 09 03 57.4 | 0.3 | -0.1 | 24.0 | 60.0 |
| CPSO | 09 05 18.4 | -0.2 | 0.2 | 33.0 | 89.2 |
| FN-WV | 09 05 46.2 | 0.5 | 0.6 | 36.1 | 80.9 |
| HN-ME | 09 06 29.4 | -0.5 | -0.8 | 41.5 | 64.7 |
| NAO | 09 09 59.1 | -0.0 | -0.4 | 70.8 | 20.2 |

67 HERRIN TRAVEL TIME TABLES

| ORIGIN | LAT. | LONG. | DEPTH (KM) | SDV | IT | STA |
|------------|---------|----------|------------|-----|----|-----|
| 08:58:49.6 | 43.572N | 127.235W | 40. CALC | 0.3 | 4 | 7 |
| 08:58:42.6 | 43.341N | 127.438W | 0. REST | 0.5 | 3 | 7 |

CALC
0 . 1
0 . 0
0 1. 2 3
.
0 . 0. 0 0
0 . 0
0 . 0

REST
0 . 1
0 . 0
0 1. 2 3
.
0 . 0. 0 0
0 . 0
0 . 0

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.67
MAJOR 94.5KM. MINOR 31.3KM. AZ= 36 AREA= 9284 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 10 JAN 76
08:58:46.0 43.000N 127.000W 0KM.

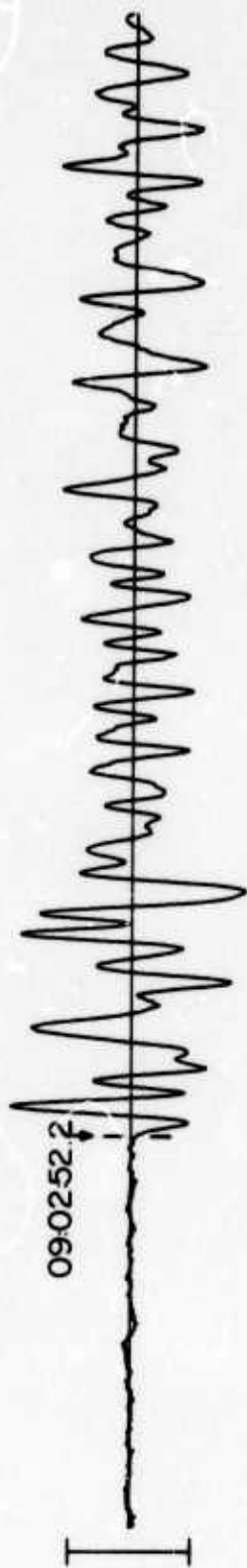
| STA. | PHASE | ARRIVAL | | INST | PER | A/T | MAGNITUDE | | DIR | DIST |
|--------|-------|------------|--|------|------|-------|-----------|-----|-----|------|
| | | TIME | | | | | MB | MS | | |
| LAO | EP | 09 02 19.0 | | SAB | 0.0 | 0. | | | | |
| WH2YKM | EP | 09 02 52.2 | | SPZ | 1.1 | 315. | 5.10 | | | 18.0 |
| WH2YK | LQ | 09 07 29.0 | | LPT | 25.0 | 1268. | | | | |
| WH2YK | LR | 09 08 26.0 | | LPZ | 21.0 | 9999. | | 0.0 | | 18.0 |
| RK-ON | EP | 09 03 57.4 | | SPZ | 1.1 | 150. | 5.18 | | | 24.0 |
| RK-ON | LQ | 09 11 49.0 | | LPT | 23.0 | 1682. | | | | |
| RK-ON | LR | 09 13 30.0 | | LPZ | 19.0 | 9999. | | 0.0 | | 24.0 |
| CPSO | EP | 09 05 18.4 | | SPZ | 1.1 | 151. | 5.58 | | | 33.0 |
| CPSO | LQ | 09 16 49.0 | | LPN | 24.0 | 9999. | | | | |
| CPSO | LR | 09 18 54.0 | | LPZ | 22.0 | 9999. | | 0.0 | | 33.0 |
| FN-WV | EP | 09 05 46.2 | | SPZ | 1.0 | 131. | 5.41 | | | 36.1 |
| FN-WV | LQ | 09 17 47.0 | | LPT | 41.0 | 9999. | | | | |
| FN-WV | LR | 09 21 08.0 | | LPZ | 20.0 | 9999. | | 0.0 | | 36.1 |
| HN-ME | EP | 09 06 29.4 | | SPZ | 1.2 | 72. | 5.06 | | | 41.5 |
| HN-ME | LQ | 09 20 47.0 | | LPT | 24.0 | 942. | | | | |
| HN-ME | LR | 09 23 48.0 | | LPZ | 20.0 | 9999. | | 0.0 | | 41.5 |
| NAO | EP | 09 09 59.1 | | AB | 1.1 | 138. | 5.74 | | | 70.8 |

| ORIGIN | LAT. | LONG. | DEPTH (KM) | MAG | SDV | STA |
|------------|---------|----------|------------|------|------|-----|
| 08:58:49.6 | 43.572N | 127.235W | 40. CALC | 5.37 | 0.24 | 5 |
| 08:58:42.6 | 43.341N | 127.438W | 0. REST | 5.39 | 0.28 | 5 |

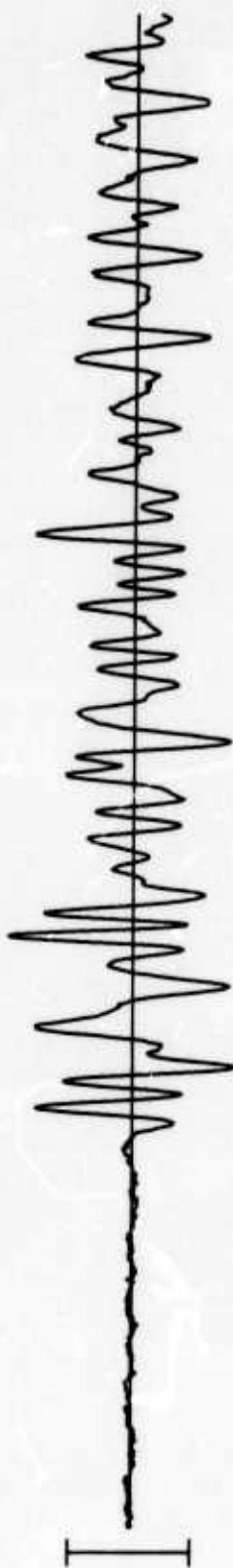
Short-period magnitudes (m_b) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

WH2YK 10 JAN 76

SPZ
186.73 MU



SPR
193.80 MU



SPT
102.64 MU



TIME



6.

RK-QN 10 JAN 76

SPZ
107.50 MU



09:03:57.4

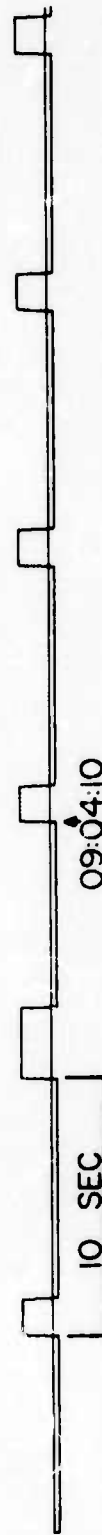
SPR
66.57 MU



SPT
22.90 MU



TIME



09:04:10

CPS0 10 JAN 76

09:05:18.4

SPZ
204.48 MU



SPR
362.01 MU



SPT
159.81 MU



TIME



∞.

FN-WV 10 JAN 76

SPZ
82.24 MU



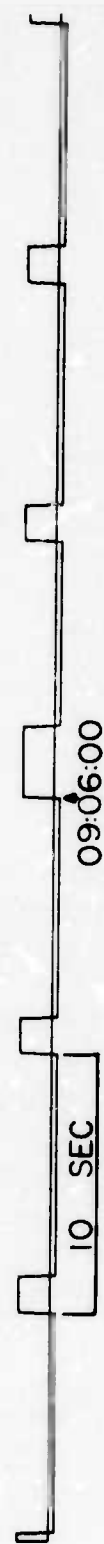
SPR
63.07 MU



SPT
41.89 MU



TIME

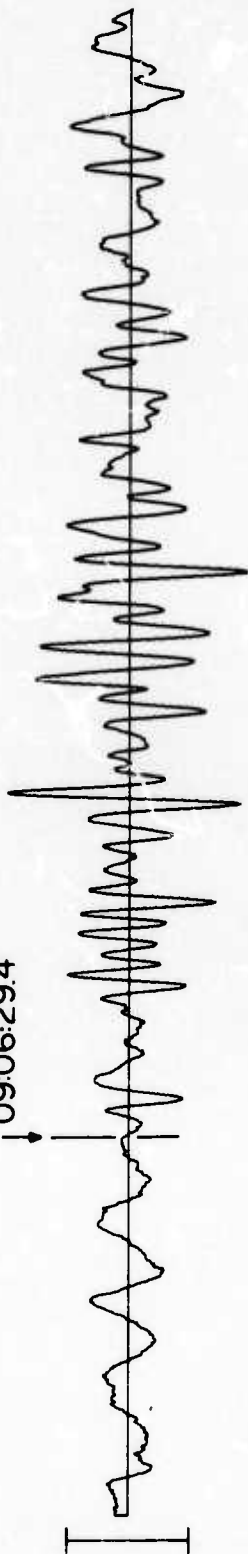


5

HN-ME 10 JAN 76

09:06:29.4

SPZ
83.05 MU



SPR
84.42 MU



SPT
41.23 MU



TIME

10 SEC

09:06:40



WH2YK 10 JAN 76

LPZ
5830.80 MU

09:08:26

LPR
8803.57 MU

09:07:29

LPT
16397.14 MU

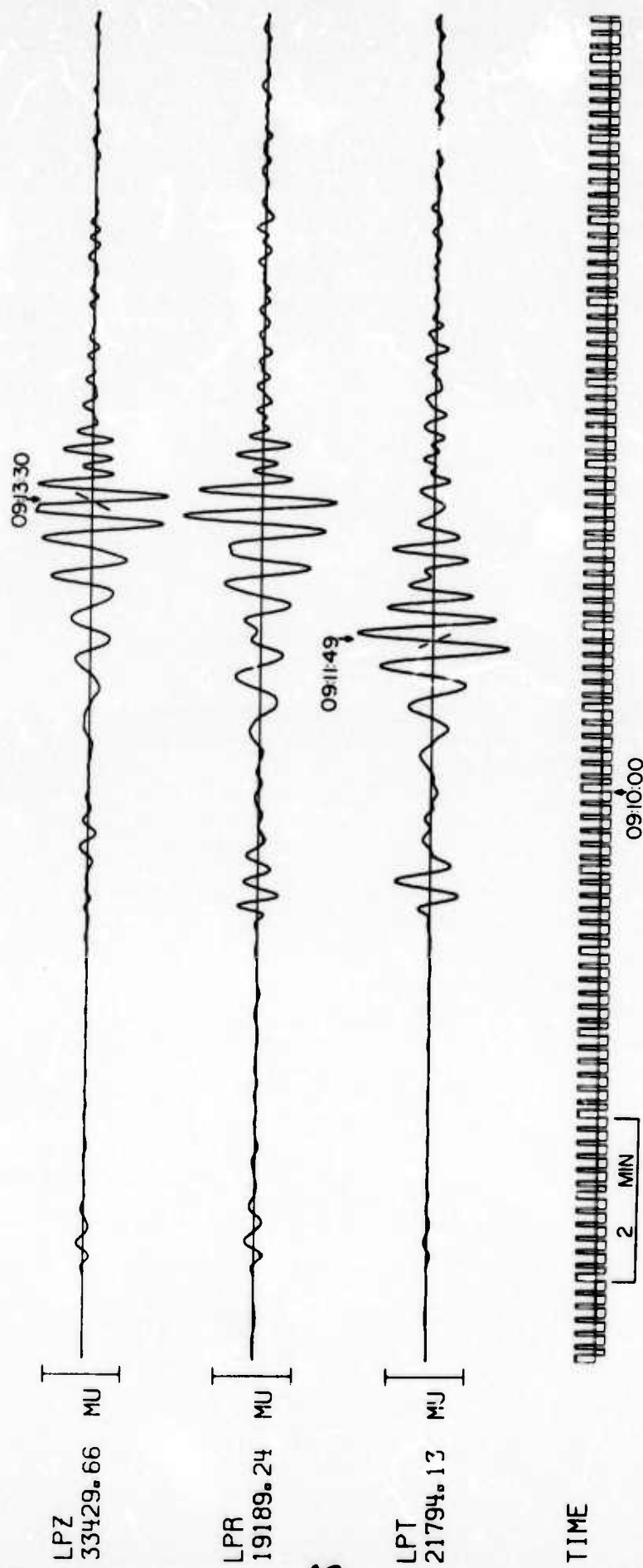
TIME

2 MIN

09:03:00



RK-ON 10 JAN 76



CPS0 10 JAN 76

LPZ
14204.30

091854



LPN
16937.37

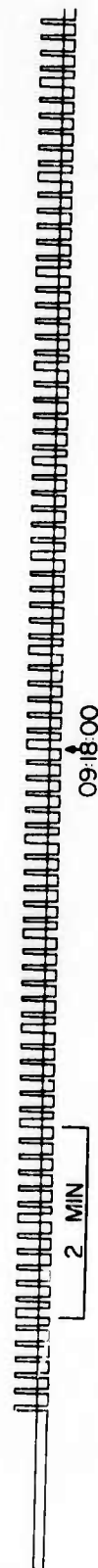
091849



LPE
12802.53



TIME



FN-WV 10 JAN 76

09:21:08

LPZ
4738.19 MU

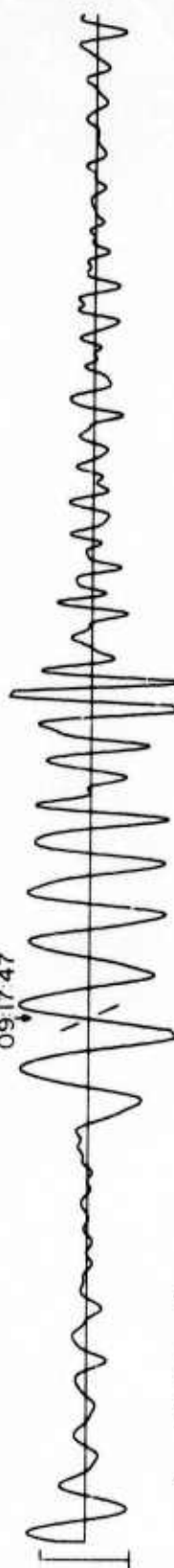


LPR
4800.56 MU



LPT
5477.06 MU

09:17:47



2 MIN

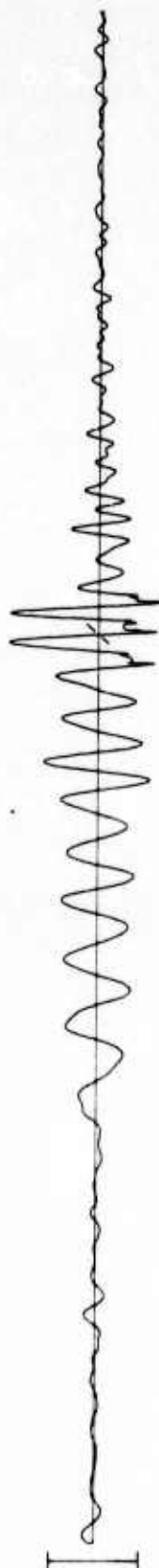
14.

HN-ME 10 JAN 76

092348

LPZ
10101.81

MU



LPR
9318.32

MU



LPT
11367.13

MU



092047

TIME



092000